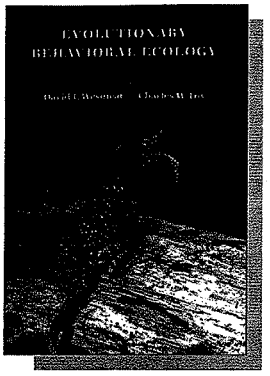


Evolutionary Behavioural Ecology

Edited by David F. Westneat & Charles W. Fox (2010) Oxford University Press, Oxford.
£98.00 (hbk)

ISBN 978-0-19-533193-6

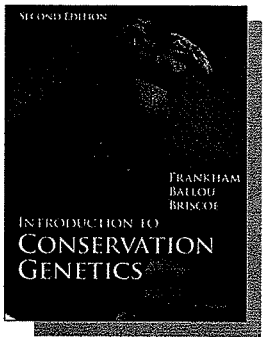
£32.50 (pbk)

ISBN 978-0-19-533193-6

This book is aimed at graduate students but the editors hope that it will also be of use to a range of more experienced scientists, who may work on the edges of the field, such as psychologists or neural scientists. It is a reasonably comprehensive set of sections and chapters, each by a leading author(s), starting with an introductory history of behavioural ecology and then working through the basic concepts and foundation disciplines, to ecological topics, social behaviour, reproductive biology and finally a set of chapters exploring the frontiers of the subject.

This is clearly an academic book, which includes much detail and many references and it does assume a basic grounding in the subject, so that it would not necessarily suit undergraduates. However, it does allow a serious exploration of many relevant and important aspects of behavioural ecology, with the evolutionary thread running through it. I shall use it as a reference book, pulling it off the shelf when I have a particular question that I need an answer to, and the reasonable paperback price puts this within grasp of most ecologists who want to understand the behavioural background of their work. It is easily recommendable in this context, but not an easy read for the general reader.

Mark Young



Introduction to Conservation Genetics (2nd ed)

Richard Frankham, Jonathan D. Ballou, & David A. Briscoe (2010) Cambridge University Press, New York.
£40.00 (pbk)

ISBN 978-0-521-7027-3

It is fair to say that molecular studies have revolutionised taxonomy, and consequently ecology. Developments and applications of these techniques have proliferated since the first edition of this textbook ten years ago, and developing issues such as global climate change have raised many new conservation questions. The timing of a second edition is therefore appropriate. The emphasis of conservation research has itself moved beyond species diversity estimation to a consideration of genetic diversity, and the importance of population size, heterozygosity, and evolutionary potential. The book begins with an introduction to these subjects and considers the relationship between genetic diversity and extinction risk. There is a commendable degree of detailed information given on techniques of DNA fingerprinting and the measurement of genetic diversity within populations, together with the dangers resulting from low diversity in species that have passed through population bottlenecks in their evolutionary history.

Evolutionary considerations are naturally a focal point of the book. Not only are subjects such as mutation and selection examined in detail, but the biogeographical factor of migration is also covered. The Mongol and Tartar invasions of Europe from the east, for example, brought rape and pillage to the continent, but also left an indelible genetic residue. The same may be expected for other species. Conservation work begins with information about genetic diversity, but it must then deal with its loss as populations decline in size, become fragmented, and are threatened by inbreeding. Each of these topics is given its own chapter, commencing with theoretical studies and leading on to practical application in areas of population management. Separate sections are devoted to the management of wild populations, captive populations, invasive species, and the challenges raised by the prospect of reintroduction of lost or threatened species. A chapter on forensic applications of molecular genetics to detect such practices as illegal hunting, or translocation of threatened